AMENDMENT - Claims

Please amend the claims, as follows:

1. (currently amended) A method for treating or preventing cardiovascular or cerebrovascular disease in a mammal, comprising administering an agent that alters the activity or concentration of an enzyme in an amount effective to treat or prevent cardiovascular or cerebrovascular disease in a mammal, wherein said enzyme catalyzes a reaction that produces or degrades a sphingolipid or a sphingolipid metabolite; and wherein said agent is not an aminoglycoside and is selected from the group consisting of a small molecule, a protein, a polypeptide, and a polypeptide derivative.

2. (currently amended) A method for treating or preventing undesirable post-ischemic events in an animal, comprising administering thereto an agent that alters the activity or concentration of an enzyme in an amount effective to treat or prevent undesirable post-ischemic events in a mammal, wherein said enzyme catalyzes a reaction that produces or degrades a sphingolipid or a sphingolipid metabolite; and wherein said agent is not an aminoglycoside and is selected from the group consisting of a small molecule, a protein, a polypeptide, and a polypeptide derivative.

3. (original) The method of claim 2 wherein said undesirable post-ischemic events occur in the heart.

4. (original) The method of claim 2 wherein said undesirable post-ischemic events occur in the brain.

5. (currently amended) A method for treating or preventing cardiovascular disease in a human, comprising administering an agent that alters the activity or concentration of an enzyme

in an amount effective to treat or prevent cardiovascular disease in a human, wherein said enzyme catalyzes a reaction that produces or degrades a sphingolipid or a sphingolipid metabolite; and wherein said agent is not an aminoglycoside and is selected from the group consisting of a small molecule, a protein, a polypeptide, and a polypeptide derivative.

6. (currently amended) The method of claim 5, wherein said sphingolipid or a sphingolipid metabolite is selected from the group consisting of sphingomyelin, sphinogosine, sphingosine-1-phosphate, ceramide, sphingosylphosphoylcholine, 3-ketosphinganine, galactosylceramide, and dihydroceramide.

7. (currently amended) The method of claim 5, wherein said enzyme is selected from the group consisting of sphingomyelin synthase, sphingomyelin deacylase, sphingomyelinase, ceramidase, sphingosine-1-phosphate phosphatase, sphingosine kinase, ~~C~~ceramide synthase, sphingosine-1-phosphate lyase, cerebrosidase, ~~C~~ceramide-1-phosphate phosphatase, ~~C~~ceramide kinase, sphingomyelin deacylase, serine palmitoyltransferase, and NADPH-dependent reductase.

8. (previously presented) The method of claim 5, wherein said enzyme is sphingomyelinase.

9-14. (cancelled)

15. (original) The method of claim 1, wherein said disease is a cardiovascular disease.

16. (original) The method of claim 15, wherein said cardiovascular disease is a cardiac disease.

17. (original) The method of claim 15, wherein said cardiac disease is selected from the group consisting of myocardial ischemia; acute myocardial infarction (AMI), coronary artery

disease (CAD); acute coronary syndrome (ACS); cardiac cell and tissue damage that may occur during or as a consequence of pericutaneous revascularization (coronary angioplasty) with or without stenting; coronary bypass grafting (CABG) or other surgical or medical procedures or therapies that may cause ischemic or ischemic/ reperfusion damage; and cardiovascular trauma.

18. (cancelled)

19. (currently amended) A method for treating or preventing cardiovascular or cerebrovascular disease in a mammal, comprising administering a pharmaceutical composition comprising an agent in an amount effective to modulate the activity of an enzyme that catalyzes a reaction that produces or degrades a sphingolipid or a sphingolipid metabolite; and wherein said agent is not an aminoglycoside and is selected from the group consisting of a small molecule, a protein, a polypeptide, and a polypeptide derivative.

20. (currently amended) A formulation comprising an agent which will, when provided to an animal in need thereof, alter the activity or concentration of an enzyme that produces or degrades a sphingolipid or a sphingolipid metabolite to a degree necessary to achieve a therapeutic effect, wherein said agent is not an aminoglycoside and is selected from the group consisting of a small molecule, a protein, a polypeptide, and a polypeptide derivative.

21. (previously presented) The method of claim 7 wherein the enzyme is sphingomyelinase and the agent is selected from the group consisting of: sphingomyelin derivatives, scyphostatins, manumycin, quinines, ubiquinol, ubiquinones, sphingomyelin methylene, anthracyclines, carnitine, desipramine, alutenusin, SR3357, adriamycins, and roselipins.

22. (previously presented) The method of claim 7 wherein the enzyme is sphingomyelinase and the agent is selected from the group consisting of: anti-oxidants, ascorbate,

alpha-tocopherol, glutathione, desipramine, and DTT.

23. (previously presented) The method of claim 7 wherein the enzyme is sphingosine kinase and the agent is selected from the group consisting of: N, N-dimethylsphingosine, D-threo-dihydrosphingosine, and a sphingoid base.

24. (previously presented) The method of claim 7 wherein the enzyme is ceramidase and the agent is selected from the group consisting of: N-acetylsphingosine, (1S,2R)-D-erythro-2-(N-myristoylamino-1-phenyl-1-propanol, (1S,2R)-L-erythro-2-(N-myristoylamino-1-phenyl-1-propanol, and N-oleoyl-ethanolamine.

25. (previously presented) The method of claim 7 wherein the enzyme is ceramidase synthase, and the agent is selected from the group consisting of: Fumonisin B1, an alternaris toxin, a viridiofungin, and an astralifungin.

26. (previously presented) The method of claim 7 wherein the enzyme is ceramide –1-phosphate phosphatase, and the agent is selected from the group consisting of: sodium fluoride, propranolol, phenylglyoxal, and N-ethylmaleimide.

27. (previously presented) The method of claim 7 wherein the enzyme is ceramide –1-phosphate phosphatase, and the agent is a cyclopropene ceramide.

28. (previously presented) The method of claim 7 wherein the enzyme is serine palmitoyl transferase, and the agent is selected from the group consisting of: lipoxamicin, a sphingofungin, an isaria sincairii compound, L-cycloserine, beta-chloro-L-alanine, myriocin, and thermozymocidin.